What is claimed is:

1. A slurry used in a chemical mechanical polishing (CMP) process for ruthenium titanium nitride (RTN) thin film, the slurry comprising : ceric ammonium nitrate $[(NH_4)_2Ce(NO_3)_6]$.

2. The slurry according to claim 1 further comprising an abrasive and an acid.

3. The slurry according to claim 2, wherein ceric ammonium nitrate is present in an amount ranging from about 1 to about 10% by weight of the slurry composition.

4. The slurry according to claim 2, wherein the acid is selected from the group consisting of HNO_3, H_2SO_4, HCl, H_3PO_4, and mixtures thereof.

5. The slurry according to claim 4, wherein HNO_3 is present in an amount ranging from about 1 to about 10% by weight of the slurry.

6. The slurry according to claim 2, wherein the abrasive is selected from the group consisting of CeO_2, ZrO_2, Al_2O_3 and mixtures thereof.

7. The slurry according to claim 2 or 6, wherein the size of the abrasive is below 1μm.

8. The slurry composition according to claim 2 or 6, wherein the abrasive is present in an amount ranging from about 1 to about 5% by weight of the slurry.

9. The slurry composition according to claim 2, wherein pH of the slurry ranges from about 1 to about 7.

10. The slurry composition according to claim 9, wherein pH of the slurry ranges from about 1 to about 3.

11. The slurry according to claim 2, further comprising a buffer solution.

12. The slurry according to claim 11, wherein the buffer solution comprises a mixture of organic acid and organic acid salt.

13. The slurry according to claim 12, wherein the buffer solution comprises a mixture of acetic acid and acetic acid salt.

14. A method for forming a RTN pattern comprising:

(a) preparing a semiconductor substrate where a RTN thin film is formed; and

(b) patterning the RTN thin film according to a CMP process using a slurry of claim 2.

15. The method according to claim 14, wherein RTN thin film is a barrier film.

16. The method according to claim 14, wherein step (b) is performed under a polishing pressure ranging from about 1 to about 4psi.

17. The method according to claim 14, wherein step (b) is performed by using a rotary type CMP system, and a table revolution number thereof ranges from about 10 to about 80 rpm.

18. The method according to claim 14, wherein step (b) is performed in a linear type CMP system where a table movement speed ranges from about 100 to about 600 ft/min.

19. A method for manufacturing a semiconductor device comprising:

(a) forming an interlayer insulating film on a semiconductor substrate having a predetermined lower structure;

(b) patterning the interlayer insulating film to form an interlayer insulating film pattern having a contact hole;

(c) filling the contact hole with conducting material and performing over-etch to form a recess contact plug;

(d) depositing a RTN thin film on the surface of the resultant structure; and

(e) forming a RTN thin film pattern on the recess contact plug by performing a CMP process using a CMP slurry of claim 2.

20. The method according to claim 19, wherein the conducting material of step (c) is polysilicon.

21. The method according to claim 19, further comprising the step of forming silicon nitride on the interlayer insulating film at the step (a).

22. The method according to claim 19, further comprising the step of forming a buffer film between the contact plug and RTN film pattern.

23. The method according to claim 22, wherein the buffer film is titanium silicide.

24. The method according to claim 19, further comprising:

(f) forming a sacrificial insulating film pattern which opens the contact plug;

(g) forming a lower electrode film on the resultant structure and performing a CMP process using the sacrificial insulating film pattern as an etch barrier to obtain a lower electrode pattern; and

(h) sequentially forming a dielectric film and an upper electrode on the resultant.

25. The method according to claim 24, wherein the lower electrode is a ruthenium film.

26. The method according to claim 24, wherein the dielectric film is a $(Ba_{1-x}Sr_x)TiO_3$ film.

27. The method according to claim 25, wherein the ruthenium film is patterned by performing CMP process using the slurry of claim 2.

28. A semiconductor device manufactured according to a method of claim 19.